

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: Merriwether's Pit Stop Pots and Septic Service
Bill and Sherri Merriwether
P.O. Box 114
Yerington, Nevada 89447

Permit: NEV2002516 – Major Modification

Locations:	Moreda Dairy	and	Circle Bar N Ranch
	12 Peeples Lane		Parcel #14-521-28
	Yerington, Lyon County, Nevada 89447		Yerington, Lyon County, Nevada 89447
	Latitude: 39° 57' 09" N		Latitude: 39° 00' 26" N
	Longitude: 119° 48' 26" W		Longitude: 119° 09' 21" W
	Township 15N, Range 25E, Sec. 31 MDB&M		Township 13N, Range 25E, Sec. 2 MDB&M

General: The Applicant proposes to modify Authorization to Apply Domestic Septage NEV2002516 to include a second land application site and to authorize another pumper to deliver septage to the second site. The Applicant is permitted to land apply domestic septage and grease trap material pumped by Merriwether's to 40 acres of nutrient deficient agricultural land at the Moreda Dairy, approximately 5 miles southwest of Wabuska, Lyon County, Nevada. The Moreda site is privately owned rangeland that has been used for grazing and is bordered by public lands managed by the Bureau of Land Management and other Moreda property.

The proposed 50-acre Circle Bar N Ranch site is agricultural land located approximately 6,500 feet north of Highway 95A, west of the intersection of Tucker Lane and Densmore Lane, near the Yerington Municipal Airport. This site may receive septage and grease trap material from Merriwether's and Easy Rooter Plumbing. The 50-acre parcel is bordered by other Circle Bar N Ranch property on all four sides.

The two 40-acre sites will be subdivided into smaller fields with only the area expected to be used for land application within one year cleared of existing vegetation. The septage must be screened to remove solids over 1/2-inch in size before the septage can be land applied. The septage must be incorporated into the soil within 6 hours of being land applied. A crop must be planted to uptake the nitrogen that is contained in the septage within one year of domestic septage application. The application rate of domestic septage will be based on the nitrogen needs of the crop planted. Currently, the Applicant is planning to plant rye at the Moreda site and wheat, barley, or rye at the Circle Bar N site. The Moreda fields will be irrigated once, shortly after planting, and used for grazing. The Circle Bar N site will be flood irrigated with the crop harvested as livestock feed.

The Applicant is planning to install an above ground storage tank, maximum size 10,000 gallons, at the Moreda site for mixing of domestic septage and grease trap material, to store the domestic septage during inclement weather, and for when the incorporation equipment is not operational or at the land application site. The domestic septage will be screened upon entering the tank at the Moreda site. The Applicant is planning to install a 21,500-gallon corrugated wall storage tank at the Circle Bar N Ranch site for the same purposes; a 1,000-gallon screening tank is also planned for this site. The tanks must not be open to the atmosphere other than screened venting.

Receiving Water Characteristics: The groundwater is reported to be at a depth of approximately 20 feet below ground surface in a 24-foot deep stock well located 150 feet south of the Moreda land application site. This well is no longer in use. The water from this well is of good quality with fecal coliform absent and nitrate, chloride, and total dissolved solids concentrations of 0.56 mg/L, 11.7 mg/L, and 243 mg/L, respectively.

According to the Permittee, the next nearest well is an irrigation well approximately one mile from the Moreda site. The only Section 31 well in the Division of Water Resources database is a 97-foot deep stock well with a static water level of 7.8 feet. In 1999, three irrigation wells were installed or expanded in Section 32. These wells were constructed to depths in excess of 400 feet and had static water levels of 2, 2, and 7 feet at the time of construction.

The groundwater was reported to be at a depth of 8 to 9 feet below ground surface at the Circle Bar N site. The Division of Water Resources well log database lists no wells in Township 13N, Range 25E, Section 2.

Characteristics: Only domestic septage and grease trap material may be land applied under this permit. No analysis of the domestic septage or the grease trap material is required. Grease trap material shall be mixed with domestic septage at a rate of one part grease trap material to a minimum of three parts domestic septage, by volume, before it is land applied.

No industrial waste may be land applied.

Flow: The application rate, in gallons of septage per acre per year, shall be based on the amount of nitrogen required by the planned crop and yield. If the crop is rye, as proposed, with an annual nitrogen demand of approximately 130 pounds per acre, domestic septage may be applied at a maximum rate of 50,000 gallons per acre per year based on literature values.

$$\text{gallons/acre} = \text{pounds of nitrogen required for crop yield} \div 0.0026$$

The Applicant has estimated a 30-day average flow of 1,000 gallons per day (gpd) and a maximum flow of 1,500 gpd at the Moreda site in the original permit application. A nitrogen requirement of 130 pounds per acre and a 30-day average flow of 1,000 gpd would require approximately 7.5 acres per year for land application. The 130 pounds of nitrogen per acre is a conservative value and may be adjusted based on the recommendation of the Cooperative Extension Service or other cropping expert with local experience regarding crop nitrogen demand and yields.

The Applicant has estimated a 30-day average flow of 1,000 gallons per day (gpd) and a maximum flow of 2,000 gpd at the Circle Bar N site in the permit modification application. The literature values for nitrogen uptake by barley and wheat are similar to rye depending on the crop yield.

Permits for the land application of domestic septage do not include flow limitations, provided that adequate land is available for domestic septage application.

Proposed Septage Use Requirements:

-Septage use must meet all of the requirements of 40CFR section 503, Standards for the Use or Disposal of Sewage Sludge.

-Domestic septage and grease trap material shall not be applied to land within 100 feet of any public roadway or within 600 feet of any residence.

-Domestic septage and grease trap material shall not be applied within 200 feet of a drinking water well not defined as a public water system.

-Domestic septage and grease trap material shall not be applied within 1,000 feet of a public water system well.

-Domestic septage and grease trap material shall not be applied within 50 feet of an irrigation well that has been sealed per Nevada Administrative Code (NAC) 534.380.

-Domestic septage and grease trap material shall not be applied within 200 feet of an irrigation well that is not sealed or cannot be documented as sealed per NAC 534.380.

-Domestic septage and grease trap material shall not be applied within 50 feet of any irrigation or drainage ditch, swale, intermittent stream, creek, river, wetland, lake, or other surface water.

-All land application sites shall be fenced and posted with warning signs stating "DOMESTIC SEPTAGE APPLIED, NO TRESSPASSING".

-Equipment to incorporate the domestic septage and grease trap material into the soil shall be on the site and in operating condition at the time of land application.

-Food crops shall not be grown on land that has had domestic septage applied within the past five (5) years. (Food crops are crops consumed by humans. These include, but are not limited to, fruit, vegetables, and tobacco.)

-The domestic septage and grease trap material shall be land applied at a uniform rate by means of a spray bar, splash plate, or similar method approved by the Division.

-The domestic septage and grease trap material shall be screened through a ½-inch or finer screen to remove solids from the septage and grease trap material prior to land application. Solid material removed from the domestic septage and grease trap material shall be disposed of in an approved landfill.

-Grease trap material shall be mixed with domestic septage at a rate of one part grease trap material to at least three parts domestic septage, by volume, before it is land applied.

-Domestic septage shall not be applied to land if the depth to groundwater is less than 3 feet.

-All tanks used for storage at the beneficial use sites shall be permanently labeled to identify the contents of the tank, the Permittee, the Permittee's phone number, and the Permittee's address.

-All tanks storing domestic septage shall be inspected daily for leakage. Documentation of the inspections shall be maintained in a bound logbook at the facility. Leaking tanks shall be immediately evacuated and not returned to service until all leaks have been repaired.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance. The Permittee shall implement and/or execute the following scheduled compliance requirements:

- a. Upon the effective date of this permit, the Permittee shall achieve compliance with the beneficial use limitations.
- b. The Permittee shall submit reports illustrating compliance or noncompliance with specified compliance dates within 14 days of any respective, scheduled compliance date to the Compliance Coordinator, Bureau of Water Pollution Control.
- c. Prior to land applying any domestic septage or grease trap material, the Permittee shall have a representative sample of the adjacent stock water well analyzed for chlorides, fecal coliform, nitrate as nitrogen, and total dissolved solids. – Complied.
- d. Prior to land applying any domestic septage or grease trap material, the Permittee shall submit to the Division documentation that the Moreda Dairy and the Circle Bar N Ranch have authorized the land application of domestic septage and grease trap material to their property.
- e. Within sixty (60) days of the permit effective date, the Permittee shall submit a revised Operations and Maintenance (O&M) Manual covering the storage and use of the domestic septage and grease trap material at both sites to the Division for review and approval.
- f. Three (3) days prior to the proposed use of any of the three permitted tanks, the Permittee shall submit to the Division notification of the tank's installation and confirmation of the tank's volume. (Moreda 10,000; Circle Bar N 21,500; and Circle Bar N screening 1,000 gallons maximum)
- g. Within forty-five (45) days of measuring the depth to water in the stock water well at ten feet or less from the surface at the Moreda Dairy site, the Permittee shall submit to the Division a proposal to determine the depth to groundwater at this land application site. The proposal shall include a monitoring plan to ensure compliance with the requirement that domestic septage not be applied if the depth to groundwater is less than three (3) feet.

Rationale for Permit Requirements: Permit requirements are necessary to protect the public health and prevent the land application sites from becoming public nuisances and sources of groundwater pollution.

Due to the shallow groundwater in the northern end of Mason Valley and the lack of any water quality data in the permit application, the Permittee is required to characterize the stock well water prior to land application of domestic septage at the Moreda site.

Due to the shallow groundwater in the northern end of Mason Valley, the Permittee is required to monitor the depth to groundwater in the Moreda site stock water well every six months. If the water in the stock water well rises to within ten feet of the surface, the depth to groundwater at the Moreda land application site must be accurately determined to ensure compliance with the depth to groundwater restriction.

Groundwater monitoring is typically not required for agricultural domestic septage beneficial use sites. No groundwater monitoring will be required at the Circle Bar N site because this site will be actively farmed with irrigation and crop harvest to ensure uptake of the applied nitrogen.

Proposed Determination: The Division has made the tentative determination to issue the modified permit without change to the January 6, 2008 permit expiration date.

Procedures for Public Comment: The Notice of the Division's intent to issue a modified permit, NEV2002516, authorizing the facility to land apply domestic septage and grease trap material subject to the conditions contained within the permit, is being sent to the **Mason Valley News** and the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of publication of the public notice in the newspaper. The date and time by which all written comment must be postmarked or transmitted to the Division via facsimile or e-mail is 5:00 P.M. October 27, 2003. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Bruce Holmgren
September 2003